## **NEXT ENGINEERS**

May 2025

Global Engineering Discovery

Volunteer Activation Kit





## Welcome to Next Engineers!

Engineers build worlds. All kinds of worlds. Worlds that haven't even been thought of yet. Today's youth are indispensable to building a world that works.

That's why we created Next Engineers. We are committed to building the next generation of engineers. Improving engineering awareness for youth (ages 13 to 14) and their guardians is key to the success of Next Engineers, which is what our **ENGINEERING DISCOVERY** program entails.

Volunteers play a critical role in Engineering Discovery, and **all GE Aerospace employees** can get involved. Your experiences and unique career journey can excite an interest in engineering and inspire youth to pursue further education and a career in engineering. Together, we can achieve our goals.

This Global Engineering Discovery Volunteer Activation Kit highlights how GE Aerospace employees can engage in Next Engineers through Engineering Discovery. It is <u>THE</u> source for all that you need to know: how to get started, share your story, lead a student activity, and get the most out of your volunteering experience.

Follow our **6 OUICK STEPS** to get started!

If you have any questions, reach out to FHI 360, the global implementing partner for Next Engineers, at <a href="MextEngineers@fhi360.org">NextEngineers@fhi360.org</a>. We are here to support you!









## 6 Quick Steps to Get Started

Ready to get involved? Follow these steps to volunteer with Engineering Discovery. Click on each step to navigate through the Activation Kit:

### 1 Get Informed

Learn about Next Engineers and the different ways you can volunteer with the Engineering Discovery program.

#### Go

Excite. Ignite. Inspire!

### 2 Get Ready

Develop a plan for how you implement an Engineering Discovery activity or event.

### 5 Make it Count

Complete a rapid follow-up survey to help us assess the impact and measure the reach of Next Engineers.

### Get Set

Prepare and practice to ensure a successful Engineering Discovery activity or event.

### 6 Spread the Word

Share your success through internal GE Aerospace channels and social media, such as LinkedIn and Instagram. Use hashtag #NextEngineers.

### **Volunteer Tip!**

To use this Activation Kit, you **MUST** have an account with **NextEngineers.org:** click on the login button of the home page to create an account using your GE Aerospace e-mail address.







# 1 Get Informed

### **Learn more about Next Engineers. Here's how:**

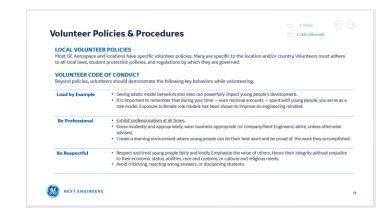
Click below for a short overview of Next Engineers and Engineering Discovery.



Next, click below for some key questions to think about before you start planning Engineering Discovery activities in your community.



Be sure to review the Volunteer Code of Conduct and be mindful of safeguarding procedures.







## **Get Ready**

Make a plan. Use the steps below to guide your thinking and click on the links for key resources.

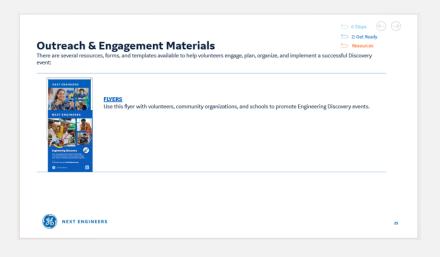
#### **HERE'S HOW**

- **Determine the type** of **ENGINEERING DISCOVERY** activity to implement.
- ☐ **Identify a location**. Consider your knowledge of the local community, schools, and organizations.
- ☐ Contact the potential event location; send an email or talk with a site representative. In your ask, be sure to include what you want to do, the ideal timeframe, number of hours, target age(s), how may volunteers you will provide, etc.
- Determine logistics:
  - ✓ Location, date, allocated time, # of students
  - ✓ Type of activity, agenda, and supplies, if needed
  - ✓ room set-up, technology and internet access, etc.
  - ✓ # of volunteers

#### REMEMBER

- Block your calendar note the date, time, and location.
- Notify your supervisor if volunteering during working hours.

**CLICK ON** the Outreach & Engagement section below for school outreach templates, volunteer recruitment templates, and more!









### **Prepare & practice**

Whichever Engineering Discovery opportunity you choose, an engaging, interactive, and fun session is no accident. It is the result of solid preparation and practice. Follow the steps below to ensure you are ready to work with youth.

#### **HERE'S HOW**

- Prepare to volunteer.
  - ✓ Register and complete the self-paced <u>eMODULES</u> to learn tips, best practices, and strategies for engaging youth.
  - Consider participating in a <u>VOLUNTEER TRAINING</u>
     SESSION.
  - ✓ Review the <u>VOLUNTEER TIPS</u> and other tools that are available to help you succeed in this opportunity.
- Prepare for the event. If conducting a Demonstration or Discovery Activity:
  - ✓ Go to **NEXTENGINEERS.ORG**. Select an appropriate activity and download the facilitator guide.
  - ✓ Obtain the required supplies and materials.

#### **BE SURE TO**

- Practice! Practice!
  - Make sure you understand the general activity structure, concepts, and themes.
  - ✓ Do a trial run. Complete the calculations, experiment, etc.
  - ✓ Be ready to discuss engineering careers and how they connect to the described activity.
- Plan how you will <u>SHARE YOUR STORY</u> in a relevant and personal way with youth; practice as needed.

#### **REMEMBER**

 Customize the activity and tailor your remarks to reflect your background and experiences, as well as the cultural norms and language of the students in your community.







### Inspire, excite, and ignite youth

Young people value experiences that engage them and encourage them to ask questions. Whether you are sharing your story, doing a demonstration, or leading a hands-on activity, you can spark their interest in engineering subjects. This may be the only exposure they get to engineering and professionals in the field. With your help, youth can build confidence in their abilities to engage with engineering principles, concepts, and inquiry-based investigations, opening the door to pursue further engineering endeavors.

#### **HERE'S HOW**

- Focus on the young people.
- Give clear and logical instructions.
- Be flexible. Change activities/set up if unforeseen things arise.
- Use language, examples, and analogies that connect with young people.
- Ask open-ended questions.
- Listen actively.
- Give the students a chance to ask questions.
- Engage all students equally, especially the quiet ones.
- Avoid criticizing, placing value, or rejecting wrong answers.
- Help teams that may be struggling.
- Take a break, if needed.

#### **BE SURE TO**

- Arrive at least 30 minutes early.
- Bring all required materials and supplies.
- Set up the room appropriately for the activity.
- Stay on top of the time so that everyone has a chance to participate.

#### **REMEMBER**

- Be present.
- Be yourself and make the activity your own.
- Take photos and collect quotes that best showcase the event only if Photo Consent Forms were completed.
- Have fun!









### Record the Engineering Discovery activity and give us your feedback! Here's how:

Next Engineers wants to make a meaningful impact. Data collection is an important tool for assessing our impact, measuring our reach, and improving our resources. After every Discovery event, we ask that 2 forms are completed...

#### **EMPLOYEE HOURS FORM**

**One volunteer** should submit this form to report the Engineering Discovery activity. Prepare to report:

- ✓ Date of event
- ✓ Number of youth, approximate number who attended a previous activity, and approximate number of female youth
- ✓ Number of parents/guardians
- ✓ Number of volunteers and approximate number of volunteering hours

Scan the QR Code or click on the image to access the Employee Hours form.

#### **VOLUNTEER FEEDBACK FORM**

**All volunteers** are encouraged to share feedback on their volunteer experiences by submitting a feedback form after each activity. The survey should take less than 2 minutes to complete!

Scan the QR Code or click on the image to access the Volunteer Feedback form.









## **Spread the Word**

### **Share your volunteering efforts.**

Tell others about your Engineering Discovery volunteer work with the Next Engineers community internally at GE Aerospace and through social media, such as Instagram, LinkedIn, blogs, etc. Consult your business communications team prior to creating social media posts to ensure compliance with GE Aerospace policies. Want to share your message more broadly? Connect with our **COMMUNICATIONS**SPECIALIST.

#### **HERE'S HOW**

- Write an article or blog for LinkedIn.
- Tweet about the event.
- Share a photo on Facebook or Instagram.
- Include Next Engineers under your volunteer experiences on LinkedIn.
- Highlight your Next Engineers experiences, activities, events, and participant successes on your personal social media accounts.

#### **HASHTAGS**

#NextEngineers

#### **BE SURE TO INCLUDE**

- **Event Summary:** Title of the event, location of event, who participated, what happened.
- **Photos:** Add a photo of you and other volunteers at the event; tag your colleagues. If students or other individuals are in the photo, be sure you have obtained a signed consent form.

#### **REMEMBER**

- All online media must comply with Company policies.
- If using photos of youth, a <u>CONSENT AND PHOTO RELEASE</u> form is required to ensure that there is no legal restriction to posting event photos and videos.



1: Get Informed





## What is Next Engineers?

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### **Inspiring the Next Generation of Engineers**

Next Engineers helps young people discover their inner engineer. Next Engineers offers three inspiring programs to engage students ages 13-18 on their paths to engineering studies. Click on **ENGINEERING DISCOVERY** to learn more about the Discovery program. You can read more about the other Next Engineer's programs on **NextEngineers.org**.



#### Opportunities to explore and discover

Students (ages 13 to 14) all over the globe participate in short, exploratory experiences and hands-on activities that are designed to connect students to real engineers, build awareness about what they do, and highlight the broad array of engineering careers and opportunities.



#### An immersive learning experience

Young people (ages 14 to 15) in select cities apply to attend a week-long introduction to the engineering process, where they explore engineering facilities and meet experienced educators, complete design challenges that address real-world problems, and interact with professional engineers and other business leaders.



#### A transformative learning experience

A three-year program that offers young people (ages 15-18) in select cities the opportunity to complete at least 180 hours of additional learning and enrichment activities that help them learn to think and act like engineers and prepare for post-secondary engineering studies. Young people who pursue further education in engineering will be offered financial support.











**Engineering Discovery** provides opportunities for young people to explore and discover. Students (ages 13 to 14) around the globe build awareness about what engineers do through a variety of short, exploratory sessions led by GE volunteers. Engineering Discovery activities are meant to inspire young people and expand their understanding of what engineering is all about. Volunteers can participate in Engineering Discovery in three unique ways. Click on the titles below for more!

3



**Share Your Story** 

Do a **Demonstration** 

Lead a **Hands-On Discovery Activity** 







#### **INSPIRE YOUTH**

Volunteers can greatly enrich their time with young people by drawing on and sharing their own experiences and accomplishments. You can share your story and spotlight various engineering careers through inperson interactions with youth, through videos, or through other social media communication. This can be done in 10-30 minutes. depending on the event type and the timeframe allotted.



#### **HERE'S HOW:**

- Speak at a school assembly as part of a CAREER PANEL.
- Serve as a **GUEST SPEAKER** or give a **KEYNOTE SPEECH** and share your career journey with students in an in-school or out-of-school setting.
- Run an informational booth at a **CAREER FAIR** and talk with youth about opportunities in engineering.
- Write a **BLog** about your career and share it on your social media channels.
- Create a **DAY IN THE LIFE VIDEO TOUR** of your work environment.
- You can also incorporate sharing your story into a Demonstration or Hands-On Activity.
- You don't have to be an engineer! It's helpful for young people to learn about all kinds of careers.



### **VOLUNTEER TIP!**

See the **VOLUNTEER RESOURCES** section for links to Share Your Story guides.





Discovery Overview





### Do a Demonstration

#### **EXCITE YOUTH**

Youth value experiences that engage them and encourage them to ask questions.

Demonstrations are short introductions to the endless opportunities in engineering. They are intended to be used at career fairs, science fairs, exhibits, any type of booth, or as an ice breaker activity.

Volunteers should choose a demo that aligns with their interests and knowledge and is most suitable to the students, the setting, and the timeframe. Demonstrations run **15-45 minutes**. Make sure to practice beforehand!

#### **HERE'S HOW:**

- Do a demonstration activity at a **STEM EVENT** hosted by the local community, library, science center, or museum.
- Host an Engineering Event, such as Take Your Child to Work Day or other on-site event, with multiple stations featuring different demonstrations.
- Facilitate a VIRTUAL DEMONSTRATION for a classroom or a group of interested youth.





#### **VOLUNTEER TIP!**

Volunteers do not need to develop content for these interactions. See the **VOLUNTEER RESOURCES** section for links to Demonstration activities and facilitator guides.









## **Lead a Hands-On Activity**

#### **IGNITE YOUTH**

Hands-on activities give youth the opportunity to think and act like engineers through fun, team-based activities.

With your help, youth can build confidence in their abilities to engage with engineering principles and inquiry-based investigations, as well as to pursue further engineering endeavors.

Hands-on activities are ideal for classroom visits, afterschool programs, or virtual workshops. They can take **50 to 90 minutes** to complete. Because they are more involved than Demonstrations and cover in-depth topics, volunteers need to dedicate time to plan and practice. Volunteers should choose activities with content that aligns with their background and knowledge and is most suitable to the students, the setting, and the timeframe.

#### **HERE'S HOW:**

- Visit a **SECONDARY SCHOOL CLASSROOM** (try a math, science, or technology class) and facilitate a Discovery activity.
- Work with an **AFTER SCHOOL PROGRAM/CLUB** and offer a Discovery activity.
- Host an Engineering Event at the GE Aerospace facility and work with youth teams to complete a Discovery activity.



#### **VOLUNTEER TIP!**

Volunteers do not need to develop content for these interactions. See the **VOLUNTEER RESOURCES** section for links to Discovery Activities and facilitator guides.









## **Before You Begin**

### **Ask yourself:**

- WHAT? What type of Discovery activity or event are you most interested in? What do you want to do? What special skills or knowledge can you offer?
- WHEN? When can you do it? How much time can you commit (thirty minutes, one hour, two hours)? When are you available (during work hours, after work, weekends)?
- WHERE? Where will it take place? At a specific school? After school program?
   Community event? Virtually?
- WHO? Who (principal, school director, teacher, other community member) do you need to engage to make it happen?
- HOW? How many students are you looking to engage? What age? How many other volunteers will you need? How much will it cost? Do you have a budget?



## **Volunteer Policies & Procedures**

6 Steps

1: Get Informed





#### **LOCAL VOLUNTEER POLICIES**

Most GE Aerospace locations have specific volunteer policies. Many are specific to the location and/or country. Volunteers must adhere to all local laws, student protection policies, and regulations by which they are governed.

#### **VOLUNTEER CODE OF CONDUCT**

Beyond policies, volunteers should demonstrate the following key behaviors while volunteering.

#### **Lead by Example**

- Seeing adults model behaviors and roles can powerfully impact young people's development.
- It is important to remember that during your time even minimal amounts spent with young people, you serve as a role model. Exposure to female role models has been shown to improve an engineering mindset.

#### **Be Professional**

- Exhibit professionalism at all times.
- Dress modestly and appropriately; wear business appropriate (or company/Next Engineers) attire, unless otherwise advised.
- Create a learning environment where young people can do their best work and be proud of the work they accomplished.

#### **Be Respectful**

- Respect and treat young people fairly and kindly. Emphasize the value of others. Honor their integrity without prejudice to their economic status, abilities, race and customs, or cultural and religious needs.
- Avoid criticizing, rejecting wrong answers, or disciplining students.



≤ 6 Steps≤ 1. Get Informed





#### **PROTECTION OF MINORS**

When interacting with students, volunteers should be aware of safeguarding procedures - designed to protect all involved.

#### **Be Mindful**

- Be mindful of:
  - Your intentions when communicating and working with a young person (< 18 years old).
  - o How your interactions might be perceived or could create a pattern.
  - o Treating all youth equitably (e.g., expressive participants vs. quiet participants).
- Our good intentions can put adults and young people in situations that could be misinterpreted.
  - Refrain from providing individual coffee, snacks, gifts, etc. Do not give favors or special treatment to one student (if there are incentives for participation, all participants and adults should be aware).
  - O Do not be alone with a student (this extends to email/digital communication: copy adults from the local community partner organization, GE Aerospace or GE Vernova Next Engineers Team, teachers, or parents, as applicable).
  - O Do not take photographs of anyone unless you have the express written consent from the individual(s) and the program.
  - o Do not socialize with any of the students outside official Next Engineers activities.
- Report any suspected or known harm towards Next Engineers participants directly to FHI 360, using one of the two options: 1) Next Engineers Staff: <a href="NextEngineers@fhi360.org">NextEngineers@fhi360.org</a> or 2) FHI 360 Office of Compliance & Internal Audit (OCIA): <a href="Compliance@fhi360.org">Compliance@fhi360.org</a>, <a href="FHI 360 Ethics and Compliance Reporting Form">FHI 360 Ethics and Compliance Reporting Form</a> or Confidential Ethics and Compliance Phone Line: +1 833 745 8886 (local airtime charges may apply)

Volunteers should take the 15-20-minute Safeguarding eModule provided by FHI 360 prior to volunteering.





## **Volunteer Resources**

Our resources, trainings, and tips get you ready for your volunteer experience. Click on a link below for more information.

- NextEngineers.org
- Volunteer Training Opportunities
- Volunteer Tips
- Share Your Story
- Student Activities
- Outreach & Engagement Materials



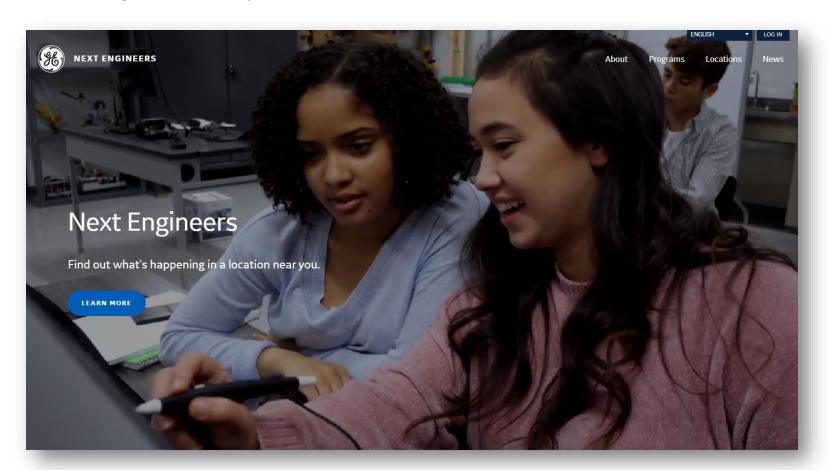






## **NextEngineers.org**

The Next Engineers website provides valuable information and resources for volunteers.





## Tip!

You must create a Next Engineers website account to access the volunteer resources referenced and hyperlinked in this guide.

Follow these simple steps:

- 1. Go to **NextEngineers.org**
- 2. Click "LOG IN"
- 3. Choose "CREATE NEW ACCOUNT"
- 4. Log in and begin using the resources!













## **Volunteer Training: Next Engineers eModules**

We offer training modules you can complete on your own time so you can feel confident engaging with youth. Click on the link below for instructions on how to access the eModules.

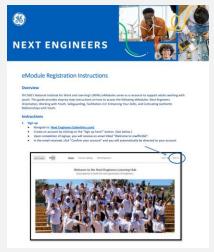
#### **eMODULES AVAILABLE**

- Safeguarding Program Participants
- Next Engineers Orientation
- Facilitation 2.0: Enhancing Your Skills
- Cultivating Authentic Relationship
- Positive Youth Development



#### **TO ENROLL**

- Follow the instructions outlined in the <u>LMS Self</u> <u>Registration Guide</u>
- 2. Select the eModule of your choice
- 3. Enjoy!





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## **Volunteer Training: Additional Opportunities**



#### **VIRTUAL WORKSHOPS AND Q&A SESSIONS**

Volunteers can obtain practical advice for implementing Next Engineers activities and working with youth.

FHI 360 will host a series of Virtual Workshops and Q&A Sessions for volunteers. These are designed to further support and provide guidance to employees looking to implement Global Engineering Discovery activities. Check your email for invitations from GE Aerospace!



#### **HOW-TO VIDEOS**

These "fast-walk" videos of Discovery Activities are designed to help volunteers feel confident and comfortable facilitating activities and interacting with youth. Go to the **RESOURCES** section of the Next Engineers website and select a Discovery Activity; play the video, if available.





⇒ 3: Get Set





## **Volunteer Tips**

Practical advice, information, and data for volunteers.



**VOLUNTEER TIPS** provide practical advice for first-time volunteers, as well as those who would like a refresher. Based on research and written by experts, these resources will help you prepare to engage youth, communicate effectively with young people, and facilitate groups of students. Tips targeting specific concepts, such as developing an engineering mindset, are written by experts in the field and provide you with a broader base of knowledge.

#### Volunteer Tips include:

- THE ENGINEERING DESIGN PROCESS
- FREQUENTLY ASKED STUDENT OUESTIONS
- TEN GUIDELINES FOR BUILDING NEW ENGINEERS
- WHAT IS ENGINEERING?
- WORKING WITH YOUTH: FACILITATION TIPS







## **Share Your Story**

⇒ 3: Get Set⇒ Resources

All volunteers can greatly enrich their time with young people by drawing on and sharing their own experiences and accomplishments in a relevant and personal way. There are several resources available to help you:



**SHARE MY STORY FORM** helps volunteers prepare to talk about engineering interests, education, and career path.

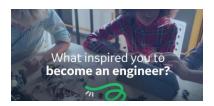
Available forms include:

- I'M AN ENGINEER! STORYTELLING WORKSHEET
- I Work with Great Engineers! Storytelling Worksheet



#### **ENGINEERING AT WORK VIDEOS**

Find out what drives a variety of engineering professionals, each with a unique story to tell. From pushing the envelope of flight and reimagining the jet engine to creating tomorrow's energy, learn what sparked their interest in engineering and what they're working on today.



#### **GE ENGINEERS STORIES**

Building a better world doesn't happen overnight—it all begins with an Aha! moment. Hear the stories of GE engineers and what inspires them to build a better world.

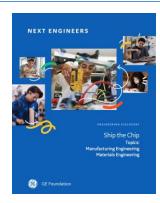






## **Student Activities**

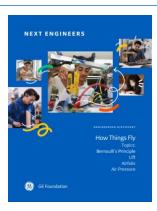
Whether you are looking for a demonstration, a short activity, or a longer activity to use during a workshop, Next Engineers has got you covered.



#### **DEMONSTRATIONS**

These short, introductory hands-on demonstration activities introduce students to engineering. The 20+ demonstrations are intended for use at career fairs, science fairs, exhibits, any type of booth, or as ice breakers.

Each Demonstration Activity includes a step-by-step guide with a list of the materials and estimated cost, facilitator checklist, and suggestions for how to engage youth with the topic discussed. Volunteers should choose an activity that aligns with their interests and knowledge and is most suitable to the students, the setting, and the timeframe.



#### **HANDS-ON ACTIVITIES**

More than 30 interactive and fun hands-on activities for secondary school students, ages 13-18; activities range from about 60 minutes to up to two hours in length and focus on one or more engineering concepts and careers.

Each Discovery Activity includes a step-by-step guide with a list of the materials and estimated cost, facilitator checklist, and notations for how to engage youth with the topic discussed. Volunteers should choose an activity that aligns with their interests and knowledge and is most suitable to the students, the setting, and the timeframe.









## **Outreach & Engagement Materials**

There are several resources, forms, and templates available to help volunteers engage, plan, organize, and implement a successful Discovery event:





Use this flyer with volunteers, community organizations, and schools to promote Engineering Discovery events.









#### **POSTER**

Share this poster with schools and community organizations. It is a great leave-behind that can ignite and excite long after the Discovery event.



#### **BRANDING KIT: COMMUNICATIONS ASSETS, FORMS & TEMPLATES**

The following customizable forms and templates are available:

- NEXT ENGINEERS LOGOS AND ICONS
- Sample Introductory School Emails
- Sample Volunteer Recruitment Materials
- CALENDAR TEMPLATES
- PHOTOS, AND MORE!



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I I do not grant permission for photographs and videos to be taken of my child under the Next Engineers Name & Image Communications Release.

Parent/Guardian Signature:	Parent/Guardian Name:	
		(printed)
Student Name:	Date:	

#### **PHOTO RELEASE FORMS**

Before you share any photos or videos publicly, make sure participants have submitted a photo & video release form.





## Acknowledgements

The Global Engineering Discovery Volunteer Activation Kit was developed by FHI 360 with support from the GE Aerospace Foundation to support volunteers with the information needed to successfully plan and implement events to excite and ignite youth about engineering.

#### **GE** Aerospace Foundation

The GE Aerospace Foundation, an independent charitable organization funded by GE Aerospace, complements the company's purpose to "lift people up" in communities where employees live and work around the world. The Foundation's philanthropic strategy and programs focus on engineering education, workforce development, and disaster relief. The Foundation also supports GE Aerospace employees through programs such as Matching Gifts and STAR Awards. When GE Aerospace launched as an independent company in 2024, the GE Foundation was relaunched as the GE Aerospace Foundation, commencing a new chapter that builds on the successful, 100+ year legacy of the previous GE Foundation.

#### **About FHI 360**

FHI 360 is a nonprofit organization that mobilizes research, resources and relationships so people everywhere have access to the opportunities they need to lead full and healthy lives. We have spent more than 50 years developing bold solutions to global challenges and creating measurable results through research and application of scientific breakthroughs. We listen to, learn from and work with communities to expand so cial and economic equity, improve health and well-being, and strengthen resilience. By bringing together deep expertise and diverse perspectives, we collaborate with partner communities and peer organizations to build enduring networks and expand our collective impact.

FHI 360 staff members provide management support for Next Engineers and develop and disseminate essential resources. A separate team of FHI 360 researchers conducts the ongoing evaluation of Next Engineers activities.

#### **Contact**

NextEngineers@ge.com

